

CLAIMS

We claim:

1. A method, comprising the steps of:

encoding a first message through employment of an outbound-message code division

5 multiple access (CDMA) code to create an encoded outbound first message;

sending the encoded outbound first message over a single, shared wireline path and contemporaneously receiving an encoded inbound second message over the single, shared wireline path; and

decoding the encoded inbound second message through employment of an inbound-

10 message CDMA code.

2. The method of claim 1, further comprising the steps of:

encoding a third message through employment of the outbound-message CDMA code

to create an encoded outbound third message that comprises a replacement outbound-
message CDMA code; and

15 sending the encoded outbound third message over the single, shared wireline path to request a replacement of the outbound-message CDMA code by the replacement outbound-
message CDMA code to increase communication security of one or more additional
outbound messages.

3. The method of claim 2, further comprising the steps of:
 - receiving an encoded inbound fourth message over the single, shared wireline path;
 - decoding the encoded inbound fourth message through employment of the inbound-message CDMA code to obtain a replacement inbound-message CDMA code; and
- 5 replacing the inbound-message CDMA code by the replacement inbound-message CDMA code to increase communication security of one or more additional inbound messages.

4. The method of claim 3, wherein the one or more additional outbound messages comprise an outbound fifth message, the method further comprising the steps of:
 - 10 encoding the outbound fifth message through employment of the replacement outbound-message CDMA code to create an encoded outbound fifth message;
 - sending the encoded outbound fifth message over the single, shared wireline path and contemporaneously receiving an encoded inbound sixth message over the single, shared wireline path; and
- 15 decoding the encoded inbound sixth message through employment of the replacement inbound-message CDMA code to obtain an inbound sixth message, wherein the one or more additional inbound messages comprise the inbound sixth message.

5. The method of claim 1, wherein the step of sending the encoded outbound first message over the single, shared wireline path and contemporaneously receiving the encoded inbound second message over the single, shared wireline path comprises the steps of:
 - 20 sending the encoded outbound first message over the single, shared wireline path at the end of a pre-determined time interval; and
 - receiving the encoded inbound second message over the single, shared wireline path at the end of the pre-determined time interval.

6. The method of claim 1, further comprising the steps of:

encoding a third message through employment of a first control CDMA code to create an outbound encoded third message that comprises an replacement outbound-message CDMA code; and

5 sending the outbound encoded third message over the single, shared wireline path to request a replacement of the outbound-message CDMA by the replacement outbound-message CDMA code to increase communication security of one or more additional outbound messages.

7. The method of claim 6, further comprising the steps of:

10 receiving an encoded inbound fourth message over the single, shared wireline path; decoding the encoded inbound fourth message through employment of a second control CDMA code to obtain a replacement inbound-message CDMA code; and replacing the inbound-message CDMA code by the replacement inbound-message CDMA code to increase communication security of one or more additional inbound 15 messages.

8. The method of claim 7, wherein a plurality of CDMA codes comprise the inbound-message CDMA code, the replacement inbound-message CDMA code, the outbound-message CDMA code, and the replacement outbound-message CDMA code, the method further comprising the step of:

20 managing allocation of the plurality of CDMA codes through employment of the first control CDMA code and the second control CDMA code, wherein the first control CDMA code and the second control CDMA code indicate that the encoded outbound third message and the encoded inbound fourth message comprise management messages.

9. The method of claim 1, wherein the step of sending the encoded outbound first message over the single, shared wireline path and contemporaneously receiving the encoded inbound second message over the single, shared wireline path comprises the steps of:

- sending the encoded outbound first message over the single, shared wireline path to a
5 network component of a sending and receiving pair; and
receiving the encoded inbound second message over the single, shared wireline path from the network component of the sending and receiving pair.

10. The method of claim 1, wherein the sending the encoded outbound first message over the single, shared wireline path and contemporaneously receiving the encoded 10 inbound second message over the single, shared wireline path comprises the steps of:

- sending one or more encoded outbound messages over the single, shared wireline path to a respective first one or more network components; and
receiving one or more encoded inbound messages over the single, shared wireline path from a respective second one or more network components;

15 wherein the step of decoding the encoded inbound second message through employment of the inbound-message CDMA code comprises the step of:

- decoding the one or more encoded inbound messages through employment of a respective second one or more inbound-message CDMA codes.

11. The method of claim 1, further comprising the step of:

- 20 preventing a collision of the encoded outbound first message and the encoded inbound second message by encoding the encoded outbound first message through employment of the outbound-message CDMA code and decoding the encoded inbound second message through employment of the inbound-message CDMA code.

12. The method of claim 1, wherein the step of sending the encoded outbound first message over the single, shared wireline path and contemporaneously receiving the encoded inbound second message over the single, shared wireline path comprises the step of:
- 5 sending the encoded outbound first message over the single, shared wireline path and simultaneously receiving the encoded inbound second message over the single, shared wireline path.

13. An apparatus, comprising:

a first network component coupled with one or more additional network components that sends a first message encoded through employment of a first CDMA code, of a plurality of CDMA codes, over a single, shared wireline path to one of the one or more additional network components and contemporaneously receives a second message encoded through employment of a second CDMA code, of the plurality of CDMA codes, over the single, shared wireline path from one of the one or more additional network components.

14. The apparatus of claim 13, wherein the first network component cooperates with one or more of the one or more additional network components to prevent one or more collisions of a plurality of messages on the single, shared wireline path through employment of one or more of the plurality of CDMA codes, wherein the plurality of messages comprise the first message and the second message.

15. The apparatus of claim 13, wherein the first network component sends one or more control messages over the single, shared wireline path to the one or more additional network components through employment of one or more control CDMA codes, of the plurality of CDMA codes, to manage communication of a plurality of messages over the single, shared wireline path.

16. The apparatus of claim 13, wherein the first network component sends the first message encoded through employment of the first CDMA code over the single, shared wireline path to a second network component of the one or more additional network components and contemporaneously receives the second message encoded through employment of the second CDMA code over the single, shared wireline path from the second network component.

17. The apparatus of claim 13, wherein the first network component sends the first message encoded through employment of the first CDMA code over the single, shared wireline path to a second network component of the one or more additional network components and contemporaneously receives the second message encoded through 5 employment of the second CDMA code over the single, shared wireline path from a third network component of the one or more additional network components.

18. The apparatus of claim 17 in combination with the second network component;

wherein the first network component encodes a third message to create an encoded 10 third message that comprises a replacement third CDMA code of the plurality of CDMA codes;

wherein the first network component sends the encoded third message to the second network component;

wherein the second network component decodes the third encoded message through 15 employment of the first CDMA code and replaces the first CDMA code with the replacement third CDMA code;

wherein the second network component encodes a fourth message through employment of the second CDMA code to create an encoded fourth message that comprises a replacement fourth CDMA code of the plurality of CDMA codes;

20 wherein the second network component sends the encoded fourth message to the first network component;

wherein the first network component decodes the fourth message through employment of the second CDMA code and replaces the second CDMA code with the replacement fourth CDMA code.

19. An article, comprising:
 - one or more computer-readable signal-bearing media; and
 - means in the one or more media for encoding a first message through employment of an outbound-message code division multiple access (CDMA) code to create an encoded
- 5 outbound first message;
- means in the one or more media for sending the encoded outbound first message over a single, shared wireline path and contemporaneously receiving an encoded inbound second message over the single, shared wireline path; and
- means in the one or more media for decoding the encoded inbound second message
- 10 through employment of an inbound-message CDMA code.

20. The article of claim 19, further comprising:

means in the one or more media for encoding a third message through employment of the outbound-message CDMA code to create an encoded outbound third message that comprises a replacement outbound-message CDMA code;

5 means in the one or more media for sending the encoded outbound third message over the single, shared wireline path to request a replacement of the outbound-message CDMA code by the replacement outbound-message CDMA code to increase communication security of one or more additional outbound messages;

means in the one or more media for receiving an encoded inbound fourth message
10 over the single, shared wireline path;

means in the one or more media for decoding the encoded inbound fourth message through employment of the inbound-message CDMA code to obtain a replacement inbound-message CDMA code; and

means in the one or more media for replacing the inbound-message CDMA code by
15 the replacement inbound-message CDMA code to increase communication security of one or more additional inbound messages.

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